Rejection of Claims 1, 4, 5, 11, 13

Claims 1, 4, 5, 11 and 13 stand finally rejected as obvious over Akhteruzzaman (US 6,584,316), in combination with Salcic (Proceedings of GeoComputation) and further in view of Byrne (US 6,708,028).

Claim 1 is as follows.

1. (original) A method of activating call forwarding for a mobile station, comprising the steps of :

monitoring a measure of received signal strength at said mobile station;

automatically transmitting a first feature code from said mobile station to a wireless network when said monitored measure of received signal strength falls below a threshold level, said first feature code activating call forwarding for said mobile station such that incoming calls are directed to a previously programmed directory number;

continuing to monitor signal strength at said mobile station during a period when call forwarding is activated;

automatically transmitting a second feature code from said mobile station to a wireless network when said signal strength rises above said threshold level, said second feature code deactivating said call forwarding.

The Examiner is urged to reconsider the highlighted limitation and his assertion that that limitation is taught in the Byrne reference. The Examiner states that neither Akhteruzzaman nor Salcic "teach when said signal strength rises above said threshold level, said second feature code deactivating call forwarding. However, Byrne teaches in an analogous art, when said signal strength rises above said threshold level, said second feature code deactivating said call forwarding (Abstract, lines 10-12, Col. 3 lines 65-66, col. 4 lines 38-43.)" Final rejection, page 7, first full paragraph. See also Final Rejection, page 3, third paragraph. Byrne is directed generally to a system and apparatus for

selecting one or another telephone transmission format or mode to use, under the theory that when a phone can operate in one mode (cordless telephone mode) as opposed to a cellular wireless mode, there as cost advantages for the user by using the cordless telephone mode. See generally col. 1 lines 7-8; col. 2 lines 58 col. 3 line 18; col. 3 lines 60 et seq.

The three passages cited by the Examiner in the final rejection do not in fact disclose or suggest transmitting a feature code to deactivate call forwarding.

The Byrne Abstract teaches a monitoring means for automatically selecting a communications means (radio system transmitter) based on a criterion such as received signal strength. ***This is not a teaching of sending a feature code deactivating call forwarding.*** Similarly, the teaching at col. 3 lines 65-66 teaches selection of a radio system to use based on received signal strength. ***This is not a teaching of sending a feature code deactivating call forwarding either.*** Col. 4 lines 38-43 is to the same effect: "automatically assigning and reassigning a user to one of the radio telephone systems in accordance with the user control signals . . . ." Moreover, the entire text of this sentence is as follows:

> In a third aspect of the invention there is provided a radio telephone system adapted to co-operate with at least one other radio telephone system, comprising user information exchange means respectively associated with each of the at least one other radio telephone system for exchanging user information signals ***between the radio telephone system and the at least one other radio telephone system***, monitoring means for monitoring user information signals of the radio telephone systems and selection means for automatically assigning and re-assigning a user to one of the radio telephone systems in accordance with the user control signals fulfilling at least one predetermined criterion, and in a fourth aspect of the invention there is provided a method for operating a radio telephone system adapted to co-operate with at least one other radio telephone system, comprising, exchanging user information respectively associated with each of the at least one other radio telephone system between the radio telephone system and the at least one other radio telephone system, monitoring user information signals exchanged between the radio telephone systems, determining whether the user information signals fulfill at least one predetermined criterion, and automatically assigning and re-assigning a user to one of the radio telephone systems in accordance with the user information signals fulfilling the at least one predetermined criterion.

Byrne, col. 4 lines 32-56 (emphasis added).

This statement is addressing the embodiment of Figure 5 in which a cellular cordless telephone operates between Digital European Cordless Telephone (DECT) system and a GSM cellular system which includes direct links 530 (Figure 5) for transmitting information between the two radio telephone systems, that is, between the MSC (mobile switching systems) and Central Control Fixed Parts (CCFP) which control cordless base stations. See col. 9 line 14-65. When a CCT telephone 200 enters the system it indicates which system (DECT or GSM) is a preferred system. "Then, the preferred system MSC or network control centre can communicate with the non-preferred system's MSC or network control centre and instruct it to handover the call to the preferred system." Col. 9 lines 64-67. ***The reference is therefore discussing inter-radio telephone system communications to control handoff from one system to another, not sending a feature code from the wireless telephone to deactivate call forwarding as claimed in claim 1.***

Byrne, in combination with Salcic and Akhteruzzaman, fails to provide any suggestion for the subject matter of claim 1 wherein while a device is in a call forwarding mode it continues to monitor received signal strength ***and sends a feature code to a network node to turn off call forwarding when the signal strength rises above a threshold level.***

As noted in the Applicants' previous responses, the call forwarding method of Akhteruzzaman works in a very different way from the invention of claim 1 in terms of how a mobile device returns to normal service (end of call forwarding). In Akhteruzzaman, after call forwarding has been triggered, the mobile device continues to monitor ***its GPS location*** (***not***

received signal strength) and only after the device has left a predetermined GPS boundary will the device send a disabling signal to revert to normal operation. See Figure 8, steps 194 and 196, and the text at column 8, lines 46-67. Salcic provides a description of a GSM (global system for mobile communication) which uses signal strength measurements ***as an aspect of a method for determining the position of a mobile station.*** As noted in the Introduction, and Abstract, and Title, the thrust of the paper is a method for automatic positioning (i.e., determining the position of the mobile station) as an alternative to using GPS (global positioning systems) signals, which are limited to "clear sky" situations where the phone is exposed to orbiting satellites. The Examiner has cited to the third paragraph in section 1.4, where the reference states that a mobile station receives downlink signal level signals from a serving base station and up to six neighboring base stations, and states that "[t]his information is a part of GSM system and is used in our system to estimate the position of the mobile station." See also section 2.2 and page 20, left hand column.

It is thus apparent that the Examiner's combination of Akhteruzzaman, Salcic and Byrne doe not teach or suggest using received signal strength in the context of call forwarding, let alone a wireless mobile station that compares signal strength to a threshold and then sends a feature code to a network node to turn off call forwarding of the signal strength is above a threshold. The rejection of claim 1 is clearly improper and should be with drawn. The rejection of claims dependent from claim 1 should be allowed by virtue of claim dependency.

As to claim 11, this claim recites that the wireless telephone includes:

"programmable logic providing instructions for automatically continuing to monitor the received signal strength after the first feature code is transmitted and ***for transmitting a second feature code from said wireless telephone to a wireless network***

deactivating call forwarding when said circuitry determines that the received signal strength, having previously fallen below a threshold level, rises above said threshold level."

The above remarks apply equally well to claim 11. The combination of Byrne, Akhteruzzaman and Salcic fails to disclose programmable logic in a wireless telephone that transmits a second feature code when the received signal strength rises above the threshold level.

As to claim 13, it recites that call forwarding service is activated and deactivated by "transmission of first and second feature codes from said roaming mobile stations, respectively, and further wherein said first and second feature codes are **transmitted when a monitored measure of received signal strength at said mobile stations falls below, and rises above, a threshold level, respectively**." In Akhteruzzaman, a message is sent to the network to turn off call forwarding not when receive signal strength rises above a threshold, as claimed in claim 13, but rather when the mobile device crosses some geographic boundary. See Figure 8, steps 194 and 196, and the text at column 8, lines 46-67. Byrne and Salcic both fail to describe monitoring signal strength in the context of call forwarding and ***sending a feature code to turn off call forwarding when monitored receive signal strength rises above a threshold.*** Claim 13 should be allowed for the same reasons as explained above.

Claims 2, 3, 7 and 10

The Examiner rejected claims 2, 3, 7 and 10 as obvious over Akhteruzzaman in combination Salcic and Byrne, and further in view of Lundborg (6,782,262).

Claims 2, 3 and 7 and 10 depend from claim 1. Assuming for the sake of argument that the Examiner's comments vis-à-vis Lundbord are accurate for these claims, Lundbord does not make up for the deficiency in the other three references in failing to teach the subject matter of claim 1, and in particular the deficiency of Byrne in failing to describe sending a feature to turn off or deactivate call forwarding. Lundbord is concerned with handoff of mobile devices between cells. Lundbord does not address call forwarding, nor does he teach or suggest that call forwarding, having been switched on, should be switched off in accordance with the teachings of claim 1 discussed above. Combining Lundborg with the other references suggest using Ec/Io measurements as a mechanism for measuring signal strength initially for purposes of geolocation (Salcic) or selection of a communications format (Byrne). However, Lundbord and the other references do not suggest continuing to monitor signal strength after call forwarding has happened and ***sending the second feature code to a network node when signal strength has improved above the threshold level.***

Accordingly, since claim 1 is not rendered obvious by the combination of Akhteruzzaman, Salcic and Byrne in view of Lundbord, the obviousness rejection of claims dependent from 1 is improper and should be withdrawn.

Claim 6

Claim 6 is rejected as obvious in view of Akhteruzzaman in view of Salcic, Byrne and Lo (RE 37,301). Claim 6 depends from claim 1 and recites that the feature code is sent to the wireless network over an access channel. Assuming for the sake of argument that Lo's "information code" is a feature code, it does not teach or suggest sending an

information code pertaining to switching on or off call forwarding. The Lo reference is directed to a multiple access protocol used in a setup channel and using a feedback mechanism (col. 3 lines 47-59; Abstract). Accordingly, Lo does not add any pertinent teaching that overcomes the deficiency of the primary references in failing to teach the subject matter of claim 1.

Claim 8

Claim 8 stands rejected over Akhteruzzaman in view of Salcic, Byrne and Jensen (2002/00022480). The Examiner cites Jensen for a teaching of call forwarding wherein the threshold level for call forwarding varies on the type of mobile station (Jensen, paragraph 15). Applicants submit that this is not a correct analysis of Jensen. Jensen teaches that values involved (signal strength, related to interference of channels between cells) are "determined by the particular type of ***mobile system involved***." The reference then discusses various types of mobile systems (not ***types of devices, as in claim 8***) such as CDMA system and AMPS (American mobile phone systems). Claim 8 is concerned with different types of mobile devices (such as year, make and model of device) within a given mobile phone system, not differences between mobile phone systems.

Moreover, even if the concepts of Jensen were applied to Akhteruzzaman or the other primary references, the resulting combination does not overcome the rejection of claim 1 since Jensen is silent on call forwarding as claimed in claim 1 and instead is directed to handoff between cells and determining interference between cells. It does not overcome the deficiency of Akhteruzzaman, Salcic and Byrne discussed above. Furthermore, applicant's representative can find no mention of feature codes in the

Jensen reference or usage of such features codes to turn on or off call forwarding. The rejection of claim 8 should be withdrawn.

Claim 9

Claim 9 stands rejected as obvious over Akhteruzzaman, Salcic and Byrne and further in view of Chawla (6,496,700).

Assuming for the sake of argument that Chawla is appropriate for citation of the subject matter of claim 9, it does not make up for the deficiency of Akhteruzzaman, Byrne and Salcic in failing to teach or suggest the subject matter of claim 1, from which claim 9 depends. In particular, Chawla is directed to methods for determining organizational parameters in a wireless system and discloses methods of determining signal strength and losses in wireless communications systems. Chawla is silent on a call forwarding feature, let alone call forwarding as claimed in claim 1. Even if Chawla was combined with Akhteruzzaman as the primary reference, at most it teaches characterization of organization parameters in a wireless system such as the Akhteruzzaman system but that fails to account for a method by which call forwarding should be terminated, by means of feature codes, as claimed in claim 1. Accordingly, the rejection of claim 9 is not proper and should be withdrawn.

Claim 12

Claim 12, which depends from claim 11, stands rejected as obvious over Akhteruzzaman, Salcic and Byrne and further in view of Haub (2004/015429). Haub is

cited for a teaching of circuitry monitoring a ratio of Ec/Io where Ec is a measure of carrier strength and Io is a measure of interference.

Haub's teaching does not overcome the deficiency of Akhteruzzaman, Salcic and Byrne in failing to teach or suggest the feature of claim 11 of a wireless telephone that includes logic "automatically continuing to monitor the received signal strength after the first feature code is transmitted ***and for transmitting a second feature code . . . deactivating call forwarding when said circuitry determines that the received signal strength, having fallen previously below a threshold level, rises above said threshold level.***" As noted above, Akhteruzzaman monitors GPS location, not signal strength, after the first signal is sent to the network to activate call forwarding (assuming that a subscriber has entered a land line telephone number that is in the same geographic proximity to where signal is lost). Therefore, Akhteruzzaman's wireless telephone does not work in the manner claimed in claim 11. Salcic measures signal strength for purposes of geolocation, not call forwarding and termination of call forwarding. Byrne measures signal strength for purposes of selection of an initial mode or format of communication, such as cellular wireless or cordless telephone, but does not teach usage of feature codes to terminate call forwarding. Haub's teaching, if applied to Byrne or Salcic, would suggest at most one method to determine location or to select an initial mode of transmission, and is irrelevant to Akhteruzzaman since that references uses GPS data, not signal strength measurements, to initially activate call forwarding. Haub does not suggest continuing to monitor Ec/Io after a call forwarding signal has been sent and deactivating call forwarding in the event Ec/Io rises above the threshold.

Consequently, even if Haub were to be combined with Akhteruzzaman, Byrne or Salcic, the result is the not invention of claim 12. The rejection should be withdrawn.

Claim 14

Claim 14 stands rejected as obvious over Akhteruzzaman, Salcic and Byrne and further in view of Kissee. The Examiner cites Kissee for a teaching of a service control node setting a threshold level (col. 13 lines 10-13.) The disclosure of received signal strength indicator (RSSI) in Kissee is in the context of how cells should be ranked in order to prioritize cells and handle a situation of overflow or excess call volumes. See col. 12 lines 48 et seq., col. 1 lines 7-14; col. 2 lines 51-65. The context of Kissee' teaching of setting thresholds for purposes of cell rankings adds nothing to the utter lack of a teaching of Akhteruzzaman, Byrne and Salcic of monitoring received signal strength and sending a feature code to a network node to turn off call forwarding when the signal strength rises above a threshold. Since the network node of Kissee ***is ranking cells, not activating and deactivating call forwarding***, it does not teach a "service control node in said cellular telephony network that activates and deactivates a call forwarding service for said roaming mobile stations, wherein said call forwarding service is activated and deactivated by transmission of first and second feature codes from said roaming mobile stations, respectively, and further wherein said first and second feature codes are transmitted when a monitored measure of received signal strength at said mobile stations falls below, and rises above, a threshold level, respectively", as claimed in claim 13 from which claim 14 depends.

Claim 15

Claim 15 stands rejected as obvious over Akhteruzzaman, Salcic and Byrne and further in view of Balachandran (5,594,943). The Examiner cites Balachandran for a teaching of a threshold level at which calls are dropped, citing to col. 2 lines 24-25. The discussion of thresholds in Balachandran is in the context of ***handoff of a mobile between cells/sectors, not call forwarding***. The document discloses that there can be two thresholds, a primary one and a secondary or emergency threshold, see col. 2 lines 2-5. The reference is explaining background information on handoffs between cells and sectors, noting that such handoffs preferably occur so as to avoid dropping of calls. That teaching is totally irrelevant to the subject matter of claim 15 (and independent claim 13) of a node in a network that is switching on and off call forwarding in response to measurements of received signal strength. Balachandran fails to overcome the deficiency of Akhteruzzaman, Byrne and Salcic in failing to teach of monitoring received signal strength and sending a feature code to a network node to turn off call forwarding when the signal strength rises above a threshold.

Claim 16

Claim 16 stands rejected as obvious over Akhteruzzaman, Salcic and Byrne and further in view of Hilliard (U.S. 6,876,949). Claim 16 depends ultimately on claim 13 and recites that the threshold level (for triggering a sending a feature code to turn off call forwarding) is offset from a dropped call level by a fixed amount. Hilliard is non-analogous art, in that it is referring to calibration of inductive vehicle detectors. See col.

4 lines 54-col. 5 line 23. The present invention is directed to call forwarding in the field of wireless telephony. The two fields have nothing to do with each other. Furthermore, the Hilliard method discloses nothing in the way of call forwarding for wireless telephones and adds nothing to the deficiency of the primary references to suggest the subject matter of claim 13.

Claim 17

Claim 17 stands rejected over Akhteruzzaman, Salcic and Byrne and further in view of Jensen. Claim 17 depends from claim 13 and adds the same subject matter as found in claim 8, discussed above.

The Examiner cites Jensen for a teaching of call forwarding wherein the threshold level for call forwarding varies on the type of mobile station (Jensen, paragraph 15). Applicants submit that this is not a correct analysis of Jensen. Jensen teaches that values involved (signal strength, related to interference of channels between cells) are "determined by the particular type of ***mobile system involved.***" The reference then discusses various types of mobile systems (not ***types of devices, as in claim 17***) such as CDMA system and AMPS (American mobile phone systems). Claim 17 is concerned with different types of mobile devices (such as year, make and model of device) within a given mobile phone system, not differences between mobile phone systems.

Moreover, even if the concepts of Jensen were applied to Akhteruzzaman or the other primary references, the resulting combination does not overcome the rejection of claim 13 since Jensen is silent on a service node facilitating call forwarding as claimed in

claim 13 and instead is directed to handoff between cells and determining interference between cells. It does not overcome the deficiency of Akhteruzzaman, Salcic and Byrne discussed above. The rejection of claim 17 should be withdrawn.

Conclusion

Applicants submit that the claims in their present form are allowable. Favorable reconsideration of the application is requested.

Respectfully submitted.

McDonnell Boehnen Hulbert & Berghoff LLP

Date: 6/5/06 By: Thomas A. Fairhall

Thomas A. Fairhall
Reg. No. 34591

CERTIFICATE OF MAILING

The undersigned hereby certifies that the foregoing REQUEST FOR RECONSIDERATION is being deposited as first class mail, postage prepaid, in an envelope addressed to MAIL STOP AF, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450, on this 5 th day of June, 2006.

Thomas A. Fairhall

Thomas A. Fairhall